

Jackson Street Shops
Jackson Street, Pennsylvania Avenue
St. Paul
Ramsey County
Minnesota

HABS No. MN-67

HABS
MINN
62-5A-PA,
17-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

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HISTORIC AMERICAN BUILDINGS SURVEY
JACKSON STREET SHOPS

HABS No. MN-67

Location: Jackson Street and Pennsylvania Avenue, St. Paul,
Ramsey County, Minnesota

USGS St. Paul East Quadrangle, Universal
Transverse Mercator Coordinates: Zone 15;
491920.4878640; 492560.4878640; 492560.4878540;
492300.4878540; 492140.4878400; 491920.4878400

Present Owner: Burlington Northern Railroad Company
176 East Fifth Street
St. Paul, Minnesota

and

Minnesota Transportation Museum
Gayle Bromander, President
2872 N.W. 18th Street
New Brighton, Minnesota 55112

Present Occupant: Vacant

Present Use: Not presently in use

Significance: The Jackson Street Shops are historically significant as the oldest existing railroad complex in Minnesota. The events leading to the development of railroading in Minnesota and the Northwest; the ambitious career of James J. Hill, the "Empire Builder" who founded the St. Paul, Minneapolis and Manitoba Railway (now Burlington Northern); and the development of St. Paul as a regional rail and trade center, all focus around the Jackson Street Shops. The major buildings on the site were built in the 1880s to serve as a base of operations for Hill's railroad and to further his ambitious plans to extend his railroad operations to the West Coast.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Dates of erection: Of the 11 buildings remaining on the site, 5 are original to the Jackson Street Shops complex and were completed in 1882. These include the Boiler and Blacksmith Shop, Machine Shop (including its Chimney), Store House, Car Shop and Wood Shop, and Oil House. The Paint Shop (destroyed by fire in March 1985) was built in 1885 and has been included in

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this survey. Later buildings added to the Jackson Street Shops complex include the Pattern Shop (1891), Engine House (1907), Pattern Storage Building (1916), Power House (c.1944), Paint Spray Building (1947) and a Storage Shed (c.1953). Major additions were made to the Car Shop in 1892 and to the Paint Shop in 1901.

2. Architect: The architect for the design and construction of the original Jackson Street Shops is not known. It may have been James Brodie, a St. Paul architect who supervised many of James J. Hill's projects including the construction of Hill's own mansion on Summit Avenue in St. Paul. Architects that have been involved in the design and construction of later buildings in the Jackson Street Shops complex are listed under the individual buildings.
3. Original and subsequent owners: The first owner of the property was the St. Paul, Minneapolis and Manitoba Railway. Subsequent owners include Great Northern Railway (name change); Burlington Northern Railroad Company (merger); and STAVOCO Industries and Minnesota Transportation Museum, Inc. (Engine House only).
4. Builder, contractor, suppliers: Builders, contractors and suppliers that have been involved in the construction of the buildings in the Jackson Street Shops complex are listed under the individual buildings.
5. Original plans and construction: Plans of the original 1882 buildings at the Jackson Street Shops were not found. However, plans of later additions and alterations to these buildings are in the files of Burlington Northern Railroad Company, 176 Fifth Street, St. Paul, Minnesota 55164. Original plans for several of the later buildings including the Pattern Storage Building (1916), Paint Spray Building (1944), Power House (1947) and Storage Shed (1953) are in the files of Burlington Northern. Original plans for the Engine House (1907) are in the files of the Great Northern Historical Society, 7225 168th Avenue West, Rosemount, Minnesota 55068. A complete list of the plans found during this survey and their location is listed in Part III. Sources of Information, D. Supplemental Information.
6. Alterations and additions: The buildings at the Jackson Street Shops have been subjected to continuous alterations and additions during the period of time that they were in use. Similarly, many of the buildings and structures that were at one time a part of the complex have been demolished. Buildings that have been demolished include the original Roundhouse (1892), Paint Shop (1885), Coach Shop (1906), Coach Shop (1911),

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portions of the Engine House (1907) together with transfer tables, turn tables, coal bins, scrap bins, platforms, trackage and sheds. Major additions to buildings include a 75' x 200' addition to the Car Shop in 1892, a 75' x 200' addition to the Paint Shop in 1901, and a 48' x 68' Brass Foundry and Chemist's Building addition to the Boiler and Blacksmith Shop in 1891. Refer to each individual building for a detailed account of alterations and additions.

B. Historical Context:

One of the first attempts to establish railroad service in Minnesota led to the incorporation of the Minnesota and Pacific Railroad Company in 1857. The company, which was organized by a group of St. Paul businessmen, planned to construct a rail line from Stillwater west to Breckenridge, via St. Paul and St. Anthony (now part of Minneapolis). This line was not built, however, and in 1862 the newly organized St. Paul and Pacific Railroad assumed control of the previous company's property. The St. Paul and Pacific constructed railroad tracks between St. Paul and St. Anthony in 1862 and later that year Minnesota's first successful locomotive run occurred on these tracks. That same year, the company built its first set of railroad shops near downtown St. Paul. The St. Paul and Pacific gradually extended its line westward, reaching Breckenridge in 1871.

Despite this early success, the company suffered financial reverses, and in 1879 it was purchased by James J. Hill and three other St. Paul investors who organized the St. Paul, Minneapolis and Manitoba Railway. James J. Hill, later known as the "Empire Builder", was to fashion from this beginning the largest rail system in the nation. To construct this vast rail network, Hill needed a railroad shop complex larger than the original St. Paul and Pacific Shops in downtown St. Paul. In 1882, he began construction of the Jackson Street Shops on a twenty-five acre site south of Oakland Cemetery in St. Paul. The railroad's third Annual Report (1882) stated that the shops were of a capacity "sufficient for the wants of the company for years to come" and were to be "furnished with tools of the most improved, modern description." The St. Paul Pioneer Press of December 10, 1882, reported that "the new shops of the St. Paul, Minneapolis and Manitoba Railway are the most notable local railway improvement of the year Stone of massive proportions is used in the walls, and heavy iron, wherever possible, takes the place of timber."

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James J. Hill, in his fourth Annual Report (1883) as president boasted, "The shops at St. Paul were completed and occupied in December 1882. . . .the expenditures for which to date, for land improvements, and machinery, amount to nearly half a million dollars. Great economy has already been experienced in the use of new shop facilities with the improved labor saving machinery, and it is thought the expenditures made in this direction will be sufficient for some time to come. . . . The old shops are in the process of removal which will give the company a large amount of yard room."

PART III. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: Architecturally, the Jackson Street Shops are significant as a largely intact complex of nineteenth and early twentieth century industrial buildings which represent the early technology of Minnesota's railroads and their development. The buildings are one of the best examples of early native limestone construction in St. Paul.
2. Condition of fabric: The buildings have not been used as railroad maintenance shops since 1970. In the ensuing years they have fallen into disrepair and have not been maintained. As a result, exterior masonry walls are in need of repointing, roofs are in poor condition, heavy timber framing is deteriorating, windows have been broken, and the buildings have been vandalized. After measurements were taken, the Paint Shop was destroyed by fire in May 1985 and has been demolished.

B. Description of Exterior:

1. Overall dimensions: Generally the buildings are one-story structures with no basements. Overall dimensions are given under the individual buildings.
2. Foundations: Foundations of the original buildings on the site are of native Platteville limestone. Foundations of buildings erected after 1900 are of poured concrete.
3. Wall construction: Original buildings on the site are of native Platteville limestone load-bearing construction. Exterior stone walls are 18"-20" thick and laid in random ashlar. Buildings and additions erected after 1900 are of brick load-bearing construction.

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4. Structural system, framing: Generally load bearing masonry walls are used throughout the complex. Roof trusses are of heavy timber and supported on wood posts. Heavy timber construction is used in two-story buildings for floor construction. Buildings erected after 1940 utilize reinforced concrete for columns and beams.
5. Openings:
 - a. Doorways and doors: Most exterior doorways in the original and pre-1910 buildings are of masonry construction with segmental arches. Doors were of wood construction with pairs of doors used at railroad car entrances. Many of the doorways and doors have been greatly modified as the size of railroad cars has increased and uses of the buildings have changed.
 - b. Windows: Windows in the original and pre-1910 buildings are of wood double and triple hung sash. Openings are of masonry with segmental arches. Many of the original windows are missing or have been replaced with glass block. Still other window openings have been filled in. Glazed monitors that ran the entire length of some of the shops have been removed or replaced with skylights.
6. Roofs:
 - a. Shape, covering: Generally low-pitched gable roofs have been used throughout the Jackson Street Shops. Post-1940 buildings have flat roofs. Roofing material on the original buildings was of tar and gravel. Modern 2-ply roofing materials have replaced the original roofing.

C. Description of Interior:

1. Floor plans: With the exception of the Engine House, all of the buildings have rectilinear plans. Shops have large open spaces that were of utilitarian design. Offices and restroom facilities have been partitioned off along with special shop areas.
2. Flooring: Many of the floors in the original buildings were of wood laid on wood sleepers. Other areas had earth floors or utilized cinders. These have been replaced with poured concrete slabs on grade in most instances.

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3. Wall and ceiling finish: Interior masonry walls of stone or brick were exposed. In some instances these have been whitewashed or painted. Shop areas have exposed structure with no finished ceilings.
4. Doorways and doors: Interior doors were of wood construction. Later doors are of hollow metal.
5. Lighting fixtures: Natural daylight was used extensively for illumination in the original buildings. Large exterior windows and glazed monitors brought natural daylight into the interiors. As electricity became available, industrial electrical fixtures were installed.
6. Heating: A central system was installed in the original Jackson Street Shops which was located in a Boiler and Engine House attached to the Machine Shop. The large Chimney on the site was a part of this system. Steam was piped to all of the buildings in the complex for both industrial processes as well as providing rudimentary heat.

D. Site:

1. General Setting: The Jackson Street Shops complex is located in a natural ravine just north of the Minnesota State Capitol in St. Paul. The site is bounded generally by Pennsylvania Avenue on the south, Rice Street on the west, Jackson Street on the east and the main line tracks of the Burlington Northern Railroad Company on the north. The site is generally level to facilitate trackage and the movement of railroad locomotives and rolling stock. Most of the trackage has been removed from the site along with transfer tables and turn tables.
2. Outbuildings: Most of the outbuildings that once dotted the site have been removed. These include coal bins, scrap bins, platforms, sheds, etc.

PART III. SOURCES OF INFORMATION

- A. Original Architectural Drawings: Architectural drawings for the original 1882 buildings were not found. However, plans of later additions and alterations to these buildings were recorded on reproducible drawings of the original plans. These plans are in the files of the Burlington Northern Railroad Company, 176 Fifth Street, St. Paul, Minnesota 55164. Original plans for several of the later buildings including the Pattern Storage Building (1916), Paint Spray

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Building (1944), Power House (1947) and Storage Shed (1953) are in the files of Burlington Northern. Original plans of the Engine House (1907) are in the files of the Great Northern Historical Society. A complete list of the plans found during this survey may be found listed in D. Supplemental Information.

- B. Early views: The earliest views of the Jackson Street Shops are found on two panoramic maps of St. Paul located in the Map Library of the Minnesota Historical Society. These panoramic maps, dated 1883 and 1888 respectively, show the original buildings in the complex and demonstrate the changes that occurred in the surrounding community as a result of their construction.

Several photographs showing general views of the Jackson Street Shops were found in the Audio-visual collection of the Minnesota Historical Society. Detailed photographs of several buildings are in the collection of the Great Northern Historical Society. Other photographs were obtained from the St. Croix Historical Review, P.O. Box 267, River Falls, Wisconsin 54022.

C. Bibliography:

1. Primary and unpublished sources:

- a. Authorization for Expenditure (AFE) Files. The AFE Files contain information regarding all projects undertaken by the railroad which required cash outlays related to buildings and property. Blueprints of building projects are included in these files along with related correspondence and expenditures. The AFE files prior to 1916 are in the possession of the Great Northern Railway Historical Society, 7225 168th Avenue West, Rosemount, Minnesota 55068. The AFE files after 1916 are located at Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164.
- b. Building permits files, City of St. Paul, 1883 - 1953.
- c. Draft nomination, National Register of Historic Places, Jackson Street Shops Historic District, Minnesota State Historic Preservation Office, St. Paul, Minnesota, unpublished manuscript, 1985.

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- d. Great Northern Railway Files. These records are in the collection of the Archives and Manuscripts Division Minnesota Historical Society. The President's Subject Files contains information pertinent to the Jackson Street Shops in File No. 10505. Other helpful files are The Vice President's Operating Files and Engineering Department Files, both of which contain information concerning the daily operation of the railroad and correspondence regarding changes and improvements to the shops.
- e. Rausch-Chambers, Helen. The Jackson Street Shops, Minneapolis, Minnesota, History Department, University of Minnesota, unpublished manuscript, 1971.

2. Secondary and published sources:

- a. Berg, Walter G., Buildings and Structures of American Railroads, New York: John Wiley and Sons, 1892.
- b. Honson, Elmer T., Railway Engineering and Maintenance Encyclopedia, New York: Simmons-Boardman Publishing Company, 1926.
- c. Jackson Street Roundhouse, St. Paul: Minnesota Transportation Museum, Inc., 1985.
- d. Martin, Albro. James J. Hill and the Opening of the Northwest, New York: Oxford University Press, 1976.
- e. Orrock, J. W., Railway Structures and Estimates, New York: John Wiley and Sons, Inc., 1918.
- f. Plat Book of the City of St. Paul, Philadelphia: G. M. Hopkins Company, 1916.
- g. Rascher Insurance Maps of St. Paul, Chicago: Map Publishing Company, 1891.
- h. "St. Paul, Minneapolis and Manitoba," St. Paul Pioneer Press, December 10, 1882, page 3, col. 1.
- i. St. Paul, Minnesota 1888, St. Paul: J. H. Mahler Co., 1888.
- j. St. Paul: State Capitol & County Seat 1883, Milwaukee: Beck and Pauli, Lithographers, 1883.
- k. Sanborn Insurance Maps of St. Paul, New York: Sanborn Insurance Company, 1903.

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1. Sanborn Insurance Maps of St. Paul, New York: Sanborn Insurance Company, 1926-56.
- m. Webster, Harry, Locomotive Running Shed Practices, London: Oxford University Press, 1947.

D. Supplemental Information:

1. The following drawings are on file at Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164:
 - a. Drawing Nos. 8536-2 Great Northern Railway, St. Paul, Minn., Jackson St., (Blacksmith and Boiler Shop), October 1894 - March 1959
8536-3
8536-7
8536-10
8536-11
8536-12
8536-13
8536-14
8536-16
 - b. Drawing Nos. 8934-15 Great Northern Railway, St. Paul, Minn., Jackson Street Wheel Shop, December 1949 - July 1969
8934-16
8934-17
8934-26
8934-28
8934-32
8934-38
 - c. Drawing Nos. 8521-1 G. N. Ry., St. Paul, Minn., Jackson Street Store House, October 1895 - September 1947
8521-2
8521-3
8521-9
8521-17
8521-18
8521-19
 - d. Drawing Nos. 8927-20 Burlington Northern, Inc., St. Paul (Jackson St.) Minnesota, Planing Mill, December 1972
8927-21
8927-22

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- e. Drawing Nos. 8927-2 Great Northern Ry., Paint Shop at
8927-2 1/2 St. Paul Shops, January 1901
8927-3
8927-4
8927-5
8927-10
8927-11
8927-12
8927-15
- f. Drawing Nos. 9324-1 Great Northern Railway, St. Paul,
9324-2 Minn., Jackson St., Paint Spray
9324-3 Shop A.F.E. 75790, February 1948
9324-4
- g. Drawing Nos. 9131-1 Great Northern Railway, St. Paul,
through Minn., Power House at Jackson St.,
9131-10 A.F.E. 60577, February 1942
inclusive
- h. Drawing Nos. 8381-2 G. N. Ry., Engine House, Jackson
8321-8 St., St. Paul, Minn., August 1906
8321-27 - February 1957
8321-38
8321-39
8321-42
8321-45
8321-46
8321-47
- i. Drawings Nos. 8025-1 Great Northern Railway, Jackson
through St., St. Paul, Minn., Pattern
8025-7 Storage Building, June 1916
inclusive
- j. Drawing Nos. 9477-1 Great Northern Railway, St. Paul,
Minn. - Jackson St. 40'-0" x
102'-8" Metal Storage Shed at
Stores, A.F.E. 84128, August 1953
- k. Drawing Nos. 8535-1 Great Northern Railway, Plan of
8535-2 Proposed Brass Foundry and
8535-3 Chemists Building at St. Paul
8535-4 Shops, August 1891 - May 1902
8535-6

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2. The following drawings are in the collection of the Archives and Manuscripts Division, Minnesota Historical Society, 1500 Mississippi Street, St. Paul, Minnesota:
 - a. Drawings Nos. 8394-1 Great Northern Railway, St. Paul,
 through Minn., Jackson Street, Car Repair
 8394-14 Shops, March 1910
 inclusive (Demolished 1982)
 - b. Plan of Tracks and Buildings at St. Paul Shops, 1888, GN
 Maps Minnesota: St. Paul, Box 1, Acc. #4996 15-F-10

Prepared by:
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University of Minnesota
June 1985

PART IV. PROJECT INFORMATION

This project was prepared as a class project for Architecture 5142, Historic Building Research and Documentation, a class offered in the School of Architecture and Landscape Architecture at the University of Minnesota, Minneapolis, Minnesota. The class project was prepared under the direction of Professor Foster W. Dunwiddie and was funded by a grant from the State of Historic Preservation Office of the Minnesota Historical Society, Saint Paul, Minnesota.